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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

CHUN-GEUN CHOI *et al.*

Serial No.: 09/531,005

Examiner: JOSEPH, THOMAS J.

Filed: 20 March 2000

Art Unit: 2174

For: VIDEO DISPLAY APPARATUS HAVING HOTKEY FUNCTIONS AND A  
METHOD THEREFORCERTIFICATE OF FACSIMILE TRANSMISSIONRECEIVED  
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Commissioner for Patents

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Attention: Examiner Thomas J. JOSEPH

Facsimile No.: (703) 746-5633

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Sir:

In accordance with our telephone discussions today, this is to certify that on this, the 10th day of October 2003, this Substitute Appeal Brief was facsimile transmitted to the Examiner. Three copies of the instant Substitute Appeal Brief are today concurrently being filed in the Patent & Trademark Office.

Respectfully submitted,



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Folio: P56011  
Date: 10/10/03  
I.D.: REB/kf

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF APPEALS AND INTERFERENCES**

In re Application of:

**Appeal No. \_\_\_\_\_**

CHUN-GEUN CHOI *et al.*

Serial No.: 09/531,005

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Art Unit: 2174

For: VIDEO DISPLAY APPARATUS HAVING HOTKEY FUNCTIONS AND A  
METHOD THEREFOR

**Attn: Board of Patent Appeals & Interferences**

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**SUBSTITUTE APPEAL BRIEF**

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Sir:

In accordance with the telephone advisory from the Examiner on Friday, 26 September 2003 that the amendments set forth in Appellants' Second Amendment After Final filed on 29 May 2003 would be entered, Appellants submit herewith a Substitute Appeal Brief incorporating the amendments filed on 29 May 2003. Pursuant to Appellants' Notice of Appeal filed on 30 June 2003, Appellants hereby appeal to the Board of Patent Appeals and Interferences from the final rejection of claims 1 thru 10 as set forth in the final Office action mailed on 29 April 2003 (Paper No. 5) and the Advisory Actions mailed on 6 May 2003 (Paper No. 7) and 20 June 2003 (Paper No. 10).

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Date: 10/10/03  
I.D.: REB/JGS/kf

PATENT  
P56011**I. REAL PARTY IN INTEREST**

Pursuant to 37 CFR §1.192(c)(1)(as amended), the real party in interest is:

SamSung Electronics Co., Ltd.  
#416, Maetan-dong, Paldal-gu  
Suwon-city, Kyungki-do, Republic of KOREA

as evidenced by the Assignment executed by the inventor on 20 March 2000 and recorded in the U.S. Patent & Trademark Office on 20 March 2000 at Reel 010698, frame 0422.

**II. RELATED APPEALS AND INTERFERENCES**

There are no other appeals and no interferences known to Appellants, Appellants' legal representatives or the assignee which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

**III. STATUS OF CLAIMS**

Claims 1 thru 10 stand finally rejected. Of the latter claims, claims 1, 5 and 8 are independent, whereas the remaining claims are dependent.

**IV. STATUS OF AMENDMENTS**

An Amendment After Final requesting amendments to claims 1, 2, 4 and 8 thru 10 was filed on 22 April 2002 in response to the final Office action mailed on 29 January 2003, and a Second Amendment After Final requesting amendments to claims 1, 2, 4 and 8 thru 10 was filed in response to the Advisory Action mailed on 6 May 2003 (Paper No. 7). A second Advisory

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Action (Paper No. 10) was subsequently issued on 20 June 2003. Request for entry of the proposed amendments was denied in both Advisory Actions. In response to Appellants' Petition for Entry of the Second Amendment After Final filed on 19 August 2003, the Examiner telephoned Applicant's undersigned attorney on 26 September 2003 and stated that the Second Amendment After Final would be entered.

#### **V. SUMMARY OF INVENTION**

The present invention relates to a video display control apparatus having a hotkey function, a method of controlling a function of the video display apparatus, and a television (TV) system controlled in response to information fetched and read from a memory unit concerning an OSD menu item.

More particularly, the invention concerns a video display apparatus having a hotkey function for menu-selection and manipulation of user-selected, frequently utilized video apparatus control functions. The invention also concerns a method of operating a video display apparatus by use of a hotkey button, and a TV system controlled in response to information concerning an OSD menu item selected by a user.

As seen in Figure 2, and as recited in claims 1 thru 4, the video display control apparatus has hotkeys for a user to invoke and control a function of a video display apparatus, the function being represented by a menu item from an on-screen display (OSD) menu. The video display

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control apparatus may be practiced with a button unit 10 having a hotkey button adapted for generating a key signal corresponding to a menu item of an OSD menu; a memory unit 20 coupled to the button unit 10, and adapted for storing information concerning OSD menu items; an OSD unit 40 for outputting an OSD character display signal to a video processing unit 50 in response to the key signal, whereby actuation by a user of the hotkey button causes a screen display of one or more OSD characters; and a control unit 30 for receiving the key signal from the button unit 10; for reading information concerning an OSD menu item stored in the memory unit, when said key signal is received; and for thereupon sending a control signal to the video display apparatus to control a function thereof.

As seen in Figure 3, and as recited in claims 5 and 6, the method of controlling a function of a video display apparatus contemplates the steps of (1) when a user selects a menu item of an on-screen display (OSD) menu screen by causing generation of a hotkey button signal, determining whether a hotkey signal setting exists therefor (step S340); (2) when no hotkey signal setting exists therefor, executing a control function in response to the hotkey button signal (step S350); and (3) when a hotkey signal setting exists therefor, setting the user-selected menu item of the OSD menu screen responsively to the hotkey button signal (step S360).

As seen in Figure 4, and recited in claim 7, the method of controlling a function of a video display apparatus contemplates the steps of (1) when a user selects a hotkey button, thereby generating a present-time hotkey button signal, determining whether a stored hotkey button signal

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identical to the present-time hotkey button signal is stored in a memory unit (step S420); (2) if a stored hotkey button signal is identical to the present-time hotkey button signal, executing a control function in response to the stored hotkey button signal (steps S430 and S450); and (3) if no stored hotkey button signal is identical to the present-time hotkey button signal, executing a default control function (steps S440 and S450).

Finally, as seen in Figures 1A, 1B and 2, and as recited in claims 8 thru 10, the invention relates to a television (TV) system that may be constituted with a TV display 2 (Figure 1A) having a plurality of functions, the TV display 2 being capable of displaying an on-screen display (OSD) menu having a plurality of menu items respectively corresponding to individual ones of said plurality of functions; a memory unit 20 (Figure 2) adapted for storing information concerning OSD menu items; a means 10 (Figure 2) for a user's selecting one of the plurality of menu items; a means 10 (Figure 2) for generating a selection signal corresponding to one of the plurality of menu items in response to the user's selection thereof; a control means 30 (Figure 2) for controlling a one of said plurality of functions; associated with the TV display 2 (Figure 1A), a receiving means 50 (Figure 2) for receiving the selection signal; reading means coupled to said receiving means 50 (Figure 2) for fetching and reading from the memory unit 20 information concerning an OSD menu item stored in the memory unit 20 when the selection signal is received, said information corresponding to said selection signal; and sending means coupled to the reading means 50 for sending a control signal to the control means 30, the control signal corresponding to said fetched and read information concerning an OSD menu item, whereby a function of the TV

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display 2 (Figure 1A) is controlled in response to the control signal and in response to the information fetched and read from the memory unit 20 (Figure 2) concerning an OSD menu item.

## VI. ISSUE

Whether claims 1 thru 10 were improperly rejected under 35 U.S.C. §103 for alleged unpatentability over Kurtenbach *et al.*, U.S. Patent No. 6,414,700 and Foster, U.S. Patent No. 6,211,870?

## VII. GROUPING OF THE CLAIMS

The claims do not stand or fall together, and thus pursuant to 37 C.F.R. § 1.192(c)(7), for the following reasons, the claims are grouped as follows:

### Claims 1, 2, and 4

These claims are separately grouped because they recite a video display control apparatus comprising the unique and non-obvious combination of a button unit, a memory unit, an OSD unit and a control unit, with the unique and non-obvious functions recited in the claims.

### Claim 3

This claim is separately grouped from parent claim 1 and the other claims because it recites the combination of elements and functions recited in parent claim 1, and additionally recites the control unit as comprising a unique and non-obvious detector for performing the unique and non-obvious functions recited in claim 3.

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This claim is separately grouped because it recites the method of controlling the function of a video display apparatus as comprising the unique and non-obvious combination of the determining, executing and setting steps recited in claim 5.

Claim 6

This claim is separately grouped from parent claim 5 and the other claims because it recites the method of claim 5 in combination with the additional, unique and non-obvious step of executing a control function in response to the hotkey button signal when a hotkey signal setting exists for the hotkey button signal generated by the user.

Claim 7

This claim is separately grouped because it recites the method of controlling the function of a video display apparatus as comprising the unique and non-obvious combination of the determining, executing and additional executing steps recited in claim 7.

Claim 8

This claim is separately grouped because it recites a television (TV) system as comprising the unique and non-obvious combination of a TV display, a memory unit, user selection means, selection signal generating means, control means, receiving means, reading means, and control

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signal sending means with the unique and non-obvious functions recited in claim 8.

#### Claim 9

This claim is separately grouped from parent claim 8 and the other claims because it recites the TV system of claim 8 in combination with a video processing unit, OSD character display signal outputting means, and actuation means having the unique and non-obvious functions recited in claim 9.

#### Claim 10

This claim is separately grouped from parent claim 8 and the other claims because it recites the TV system of claim 8 in combination with determining means, executing means and additional executing means having the unique and non-obvious functions recited in claim 10.

### VIII. ARGUMENT

#### Patentability Over Prior Art

For the reasons stated below, Appellants submit that claims of this application recite the invention in sufficient detail to be patentable over the prior art cited in the final Office action.

#### Petition for Entry of Second Amendment After Final

As stated above, a Petition for Entry of the Second Amendment After Final is being submitted herewith. In that regard, it should be noted that, in the Second Amendment After Final,

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the specification was amended to place the application in better form for appeal, and that claims 1, 2, 4 and 8 thru 10 were amended for the sole purpose of improving their form. Therefore, the amendments to the specification and the claims do not raise new issues requiring further consideration or search by the Examiner, and thus the Second Amendment After Final should have been entered.

More specifically, in the Advisory Action of 20 June 2003 (Paper No. 10), the Examiner stated that the Amendment After Final filed on 29 May 2003 (Paper No. 9) would not be entered because the amendments "are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal" (quoting from paragraph 2(c) of the Advisory Action). Appellants respectfully disagree.

The amendments to the specification place the application in better form for appeal by improving form and by eliminating certain typographical and other errors. For example, a spelling error at paragraph 4, line 5 is being corrected; a reference numeral at page 5, line 12 is also being corrected; references to the various blocks representing steps of the method shown in the flowchart of Figure 3 are being inserted at page 6, line 14-page 7, line 3; form is being improved at page 7, lines 18-20; and typographical errors are being corrected at page 8, lines 5, 11 and 20.

In the continuation sheet for paragraph 2 of the Advisory Action of 6 May 2003 (Paper No. 7), the Examiner stated that the amendment to page 7, lines 7-10 of the specification requires

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"further consideration". The amendment in question merely adds the following sentence: "If not, a return to step S320 is executed" (note that the typographical error pointed out by the Examiner is now corrected). The latter sentence refers to Figure 3 and merely states that, as shown in Figure 3 of this application as originally filed, if step S360 results in a determination that a cancellation has not been performed, a return to step S320 is executed. Since Figure 3, as originally filed, has clearly shown the step or operation in question (return to step S320), the Examiner has been afforded the opportunity to consider this step or operation from the outset of the examination of this application, and thus the addition of a sentence merely rendering the specification complete and consistent with originally filed Figure 3 should not, and does not, require "further consideration".

The amendments to the claims also simplify the issues for appeal by improving form and eliminating what some Examiners might consider to be recitations objectionable under 35 U.S.C. §112 (second paragraph). For example, in claims 2 and 9, the phrase "one or more" has been replaced by the preferable phrase "at least one"; improper use of the articles "a" or "an" referring to an element already recited in claims 4 and 8 has been corrected by substituting the correct articles "said" and "the"; improper grammatical usage of "responsively" in claims 8 and 9 has been corrected by substituting the correct expressions "in response" and "responsive".

In the continuation sheet for paragraph 2 of the Advisory Action of 6 May 2003 (Paper No. 7), the Examiner stated that the recitation in claim 8 of "menu items selected by the user in

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response to selection thereof by the user" required "further consideration". The original wording of claim 8 indicated that a selection signal is generated "responsively to a user's selections thereof". This improper grammatical form clearly resulted from a translation error in translating the original Korean priority application into English for filing in the U.S. Patent and Trademark Office. The proposed amendment to claim 8 recites that the selection signal is generated "in response to selection thereof by the user" (quoting from claim 8, lines 8-9 on page 8 of this Second Amendment after Final). The change in wording does not change the meaning of the original recitation; it merely improves the grammatical form. Therefore, contrary to the assertion by the Examiner in the continuation sheet for paragraph 2 of the Advisory Action, the amendment should not, and does not, require "further consideration".

In the continuation sheet for paragraph 2 of the Advisory Action of 20 June 2003 (Paper No. 10), the Examiner alleged that the changed in punctuation in claim 1 "creates an interpretation that raises new issues" (quoting from the Advisory Action). However, the only punctuation changes in claim 1 are three instances, in the last paragraph of claim 1, in which a semi-colon is changed to a comma and a comma is deleted.

In that regard, the previous version of claim 1 recited (in the last paragraph) "a control unit for receiving said key signal from said button unit; for reading information ... memory unit, when said key signal is received; and for thereupon sending a control signal ... " (underlining indicates the two semi-colons and a comma). Clearly, the semi-colons were typographical errors; clearly,

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the three functions (receiving, reading and sending) could only be interpreted as being functions of the control unit since no other element is recited in the last paragraph of claim 1; and, clearly, the information to be read in the first operation (the "reading" operation) is to be read "when said key signal is received" (as recited after the comma in the last paragraph of claim 1). No other interpretations are possible or reasonable.

By replacing the semi-colon by commas in the last paragraph of claim 1, the latter interpretation is retained, and thus the only change is a change in form to correct typographical errors. There is no change in meaning or interpretation, as alleged by the Examiner.

To summarize, the amendments to the specification and claims are merely for the purpose of correcting minor errors and improving form. They do not change the meaning of the language or recitations in question. Moreover, they do not introduce new subject matter or subject matter not previously considered by the Examiner, and they do not raise new issues or questions requiring further consideration or search. As a result, the Second Amendment after Final should have been entered.

#### Patentability Over the Prior Art

Kurtenbach *et al.* '700 discloses a graphical user interface (GUI) that allows access to a large number of commands without subjecting the user to information overload. The disclosed GUI provides a single interaction technique allowing grouping by function, and has an interface

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that is used in essentially the same way by novices and experts. The GUI is characterized by pop-ups include menu bars and marking menu zones, wherein the menu bars overlap the zones. The menu bars are positioned around a central marking zone with the application menu bar positioned outermost and the window menu bar located innermost. The menu bars are arranged in a "stair step" pattern, and commands are spread uniformly or justified within each menu bar. The zones form a visual square, and are divided into a central zone and four outer zones, and user customizable marking menus are activated when a mouse button is held down while the cursor is in one of the zones.

Foster '870 discloses a portable hand-held remote control unit device with an editing system which may be utilized for selecting designated functions in several remotely controllable multimedia processing units.

In paragraph 2 of the final Office action, the Examiner alleged that Kurtenbach *et al.* '700 discloses "a button unit comprising at least one hotkey button adapted for generating a key signal corresponding to a menu item on the OSD menu" (quoting from paragraph 2, lines 12 on page 2 of the Office action). However, the Examiner admitted that Kurtenbach *et al.* '700 "fails to teach an OSD unit for outputting an OSD character display signal to a video processing unit in response to a said key signal, whereby actuation by a user of said hotkey button causes a screen display of one or more OSD characters" (quoting from page 3, lines 1-4 of the final Office action). Then, in order to compensate for the latter deficiency in the disclosure of Kurtenbach *et al.* '700, the

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Examiner cited Foster '870, stating that Foster '870 teaches an editing system in which a customized hotkey can be created, and then the Examiner alleged that "[t]his customization allows the user to actuate a personal hotkey while causing the screen to display one or more OSD characters." (quoting from page 3, lines 9-11 of the final Office action).

For the reasons stated below, Appellants oppose the combination of references cited by the Examiner on the grounds that it constitutes an improper combination of references under 35 U.S.C. §103. However, even if the combination of references is proper (and Appellants do not concede that it is), the combination does not disclose or suggest each element and function of independent apparatus or system claims 1 and 8, and each element and/or step of independent method claims 5 and 7. For example, where in the references is there a disclosure of the button unit, memory unit, OSD unit and control unit recited in claim 1, or the TV display, memory unit, selecting means, generating means, control means, receiving means, reading (or fetching and reading) means and sending means recited in claim 8? Furthermore, where in references cited is there a disclosure of the three steps recited in method claim 5 or the three steps recited in method claim 7? Neither the previous Office actions nor the present final Office action provide an indication as to where the above elements or steps are disclosed. Whereas the Examiner does provide some general references to certain figures or certain portions of the text of the two cited patents, there is no stated correlation between the elements and steps/functions recited in the claims and specific elements or textual passages in the cited patents.

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In the continuation sheet for paragraph 5 of the Advisory Action of 20 June 2003 (Paper No. 10), the Examiner merely states that "Kurtenceh[sic] teaches a TV display, memory unit, selecting means, generating means, control means, receiving means, reading means, and sending means (fig. 2; fig. 6, #114, #110, #112)"(quoting from the continuation sheet of the Advisory Action). However, although this statement is slightly more specific than statements raised in the two previous Office actions, there is still no statement on the record as to what specific elements in the cited reference correspond to each of the eight elements of the invention as listed in the Examiner's statement (quoted above). In fact, in the above-quoted statement, the Examiner identifies eight claimed elements as being allegedly disclosed in Kurtenbach *et al.* '700, but the statement only contains three listed reference or numbers (110, 112 and 114). Thus, not all of the claimed elements are accounted for in the Examiner's statement.

Furthermore, in citing the combination of references under 35 U.S.C. §103, the Examiner asserts (at page 3, lines 11-13 of the final Office action) the following:

"It would have been obvious to one with ordinary skill in the art at the time of the invention to combine the hotkey actuations taught by Foster with the GUI coupled with hotkeys taught by Kurtenbach. Doing so gives the user greater flexibility in establishing personalized hotkeys."

Although this rejection is based on what is alleged to be the level of ordinary skill in the art, the final Office action and the record do not contain any findings based on substantial evidence

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as to the level of ordinary skill in the pertinent art. In *In re Dembicza*k, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999), the Federal Circuit overturned an obviousness rejection by the Board because of its failure to make the kind of obviousness legal analysis that the Supreme Court commanded in *Graham v. John Deere Co.*, 376 U.S. 1, 17-18 (1966). The Federal Circuit has consistently held that such a legal analysis must begin with specific findings of fact regarding the level of ordinary skill in the art. Thus the *Dembicza*k decision held that an obviousness rejection must be reversed if, like the instant final rejection, it fails to contain "specific findings of fact regarding the level of ordinary skill in the art." 175 F.3d at 1000-01, 50 USPQ2d at 1618. In addition, the findings that the Examiner makes as to the ordinary level of skill must be supported by substantial evidence of record. *In re Kaplan*, 789 F.2d 1574, 1580, 229 USPQ 678, 683 (Fed. Cir. 1986) ("Even if obviousness of the variation is predicated on the level of skill in the art, prior art evidence is needed to show what that level of skill was.").

Contrary to the state of the law governing rejections under 35 U.S.C. §103, the Examiner in the final Office action merely states his opinion, unsupported by evidence, that a combination of the disclosures of Kurtenbach *et al.* '700 and Foster '870 "gives the user greater flexibility". Thus, the final rejection lacks findings and analysis that the Federal Circuit considers essential to support a rejection based on ordinary skill in the art, and is wholly unsupported by the evidence before the Board. In addition, the rejection in the final Office action lacks substantial evidence of record to support such findings, even if they had been made.

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In addition, the final Office action does not contain findings to support existence of a specific teaching, suggestion, or motivation in the prior art to combine Kurtenbach *et al.* '700 and Foster '870. As indicated above, the only statement made in the Office action is as follows:

"Doing so [combining references] gives the user greater flexibility in establishing personalized hotkeys" (quoting from page 3, lines 13-14 of the final Office action).

Before the Examiner may combine the disclosures of two or more prior art references under 35 U.S.C. § 103(a) in order to establish a *prima facie* case of obviousness, it must be established on the record that some specific suggestion, motivation, or teaching is found in the prior art which would have led an ordinary artisan to select those specific references, and to adapt and combine them in the same way that the inventor did. *Karsten Mfg. Corp. v. Cleveland Gulf Corp.*, 243 F.3d 1376, 1385, 58 USPQ2d 1286, 1293 (Fed. Cir. 2001) ("In holding an invention obvious in view of a combination of references, there must be some suggestion, motivation, or teaching in the prior art that would have led a person of ordinary skill in the art to select the references and combine them in the way that would produce the claimed invention."); *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1998) (teaching or motivation or suggestion to combine is an "essential evidentiary component of an obviousness holding"); *ATD Corp. v. Lydall, Inc.*, 159 F.3d 534, 546, 48 U.S.P.Q.2d 1321 (Fed. Cir. 1998) ("There must be a teaching or suggestion within the prior art, or within the general knowledge of a person of ordinary skill in the field of the invention, to look to particular sources of information, to select particular elements, and to combine them in

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the way they were combined by the inventor."); *In re Rouffet*, 149 F.3d 1350, 1355, 47 U.S.P.Q.2d 1453 (Fed. Cir. 1998); *In re Chu*, 66 F.3d 292 (Fed. Cir. 1995); *Heidelberger Druckmaschinen AG v. Hantscho Commercial Prods., Inc.*, 21 F.3d 1068, 1072 (Fed. Cir. 1994) ("When the patented invention is made by combining known components to achieve a new system, the prior art must provide a suggestion or motivation to make such a combination."); *In re Jones*, 958 F.2d 347, 351, 21 U.S.P.Q.2d 1941, 1943-44 (Fed. Cir. 1992); *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d 1586, 1589-90 (Fed. Cir. 1988); *In re Geiger*, 815 F.2d 686, 688 (Fed. Cir. 1987); *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 U.S.P.Q.2d 929, 933 (Fed. Cir. 1984).

As also pointed out above, the statement in the final Office action that combining the references "gives the user greater flexibility in establishing personalized hotkeys" is merely the opinion of the Examiner, and thus it does not satisfy the requirements of the Federal Circuit's case-law, particularly *In re Lee*, 277 F.3d 1338 (Fed. Cir. 2002), for a teaching, suggestion, or motivation. That is, the statement in the final Office action does not refer to any specific teaching, suggestion, or motivation in the prior art. At best, it says that combining the references would provide the benefits that the specification of the present application teaches, but that is pure hindsight, which is not permitted. The final Office action merely states the benefits that accrue once the combination of elements is made, and it does not explain how or why an artisan, not knowing of the teachings of the present application, would be motivated by a review of the disclosure of Kurtenbach *et al.* '700 to seek and study the disclosure of Foster '870, and to employ the disclosure of Foster '870 in modifying that of Kurtenbach *et al.* '700 while selecting particular

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elements from the two references in order to arrive at the combination of elements or steps/functions disclosed by the Applicant. The final Office action contains no specific, finding "as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed," as required by *Lee*, 277 F.3d at 1343, quoting *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000).

In rejecting claim 4, the Examiner states the following:

"Doing so [combining the references] gives the user the ability to customize video and audio output control keys" (quoting from lines 14-15 on page 4 of the final Office action).

This is, however, merely a statement of what the invention does, and does not constitute a teaching, suggestion, or motivation in the prior art for making the combination of references. Giving the user that specific capability is only taught in the specification of the present application, and that teaching cannot be used against the present Appellants as has been held by the Federal Circuit in the *Lee* case, *supra*.

Independent claim 8 is recited in means-plus-function format. It corresponds generally to claim 1, but is directed more narrowly to a TV system. As a claim in means-plus-function format, the claim incorporates by reference the structures described in the specification that correspond to the respective recited functions and equivalents thereof. *Chiuminatta Concrete Concepts v. Cardinal Indus., Inc.*, 145 F.3d 1303, 46 U.S.P.Q.2d 1752 (Fed. Cir. 1997).

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The structure described in the specification is concededly not anticipated by any reference of record. Further, nothing in the prior art of record provides a specific teaching, suggestion, or motivation to combine selected elements and/or functions of Kurtenbach *et al.* '700 in the manner that those selected elements are combined in the presently claimed invention. Thus, the subject matter claimed in the present application has not been shown to be obvious over the cited references.

In rejecting independent claim 8 (on pages 4 and 5 of the final Office action), the Examiner does not state where, in the references, there is a disclosure of each element and function recited in claim 8. Moreover, in certain cases where the Examiner cites an element in Foster '870 which is alleged to correspond to a claimed element, the correspondence does not exist. For example, the Examiner cites element 1166 in Figure 10 of Foster '870 as corresponding to the claimed "receiving means", the claimed "reading means", and other "means" or functions as well (see page 5, lines 6-20 of the final Office action). In fact, element 1160 is merely an icon or menu item entitled "DAD" designating a function or functions reserved for a parent of a household in which the system of Foster '870 is functioning (see column 11, lines 15-17 of Foster '870).

In addition, the final Office action does not state where, in the primary reference (Kurtenbach *et al.* '700), one of ordinary skill in the art would find the suggestion or motivation to seek the Foster '870 reference for the purpose of modifying the disclosure of the primary reference. In fact, in the rejection of claim 8, the Kurtenbach *et al.* '700 reference is only

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mentioned briefly (*see* page 4, line 20 of the final Office action), with no statement as to where in Kurtenbach *et al.* '700 one of ordinary skill in the art would find the motivation or instruction for seeking the disclosure of Foster '870 and combining it with that of Kurtenbach *et al.* '700.

#### IX. CONCLUSION

For the reasons stated above, the requirements for a proper and valid rejection under 35 U.S.C. §103 have not been satisfied in the final Office action, and thus the claimed invention is clearly distinguishable over the cited prior art so as to preclude such a rejection.

In view of the law and facts stated herein, as well as all of the foregoing reasons, Appellants believe that the rejection is improper, and respectfully requests that the Board refuse to sustain the outstanding rejection of claims 1 thru 10 under 35 U.S.C. §103.

Respectfully submitted,



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## X. APPENDIX

CLAIMS UNDER APPEAL (1-10)

1. (Currently Twice Amended) A video display control apparatus having hotkeys for a user  
2 to invoke and control a function of a video display apparatus, said function represented by a menu  
3 item from an on-screen display (OSD) menu, said video display control apparatus comprising:  
4 a button unit comprising a hotkey button adapted for generating a key signal corresponding  
5 to a menu item of an OSD menu;  
6 a memory unit coupled to the button unit, and adapted for storing information concerning  
7 OSD menu items;  
8 an OSD unit for outputting an OSD character display signal to a video processing unit in  
9 response to said key signal, whereby actuation by a user of said hotkey button causes a screen  
10 display of one or more OSD characters; and  
11 a control unit for receiving said key signal from said button unit, for reading information  
12 concerning an OSD menu item stored in the memory unit when said key signal is received, and for  
13 thereupon sending a control signal to the video display apparatus to control a function thereof.

1. 2. (Currently Once Amended) The video display control apparatus of claim 1, wherein the  
2 OSD menu displays at least one OSD menu item on the screen of the video display apparatus.

1. 3. (Original) The video display control apparatus of claim 1, wherein said control unit  
2 further comprises a detector for determining whether present-time information corresponding to

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3 an OSD menu item selected at a present time is identical to past-time information corresponding  
4 to an OSD menu item and already stored in the memory unit and, when said present-time  
5 information is not identical to said past-time information, for enabling storage of said present-time  
6 information in the memory unit.

1 4. (Currently Once Amended) The video display control apparatus of claim 1, wherein said  
2 function of said video display apparatus is selected from the following group: audio mute, audio  
3 volume control, screen position, screen contrast, screen brightness, color, and tint.

1 5. (Previously Once Amended) A method of controlling a function of a video display  
2 apparatus, said method comprising the steps of:

3 (1) when a user selects a menu item of an on-screen display (OSD) menu screen by causing  
4 generation of a hotkey button signal, determining whether a hotkey signal setting exists therefor;  
5 (2) when no hotkey signal setting exists therefor, executing a control function in response  
6 to the hotkey button signal; and  
7 (3) when a hotkey signal setting exists therefor, setting the user-selected menu item of the  
8 OSD menu screen responsive to the hotkey button signal.

1 6. (Original) The method of claim 5, wherein said method comprises the following further  
2 step after step (3): when a hotkey signal setting exists therefor, executing a control function in  
3 response to the hotkey button signal.

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1           7. (Original) A method of controlling a function of a video display apparatus, said method  
2           comprising the steps of:

3           (1) when a user selects a hotkey button, thereby generating a present-time hotkey button  
4           signal, determining whether a stored hotkey button signal identical to the present-time hotkey  
5           button signal is stored in a memory unit;  
6           (2) if a stored hotkey button signal is identical to the present-time hotkey button signal,  
7           executing a control function in response to the stored hotkey button signal; and  
8           (3) if no stored hotkey button signal is identical to the present-time hotkey button signal,  
9           executing a default control function.

1           8. (Currently Once Amended) A television (TV) system, comprising:  
2           a TV display having a plurality of functions, said TV display being capable of displaying  
3           an on-screen display (OSD) menu having a plurality of menu items respectively corresponding to  
4           individual ones of said plurality of functions;  
5           a memory unit adapted for storing information concerning OSD menu items;  
6           means operable by a user for selecting one of said plurality of menu items;  
7           means for generating a selection signal corresponding to said one of said plurality of menu  
8           items in response to selection thereof by the user;  
9           control means for controlling said plurality of functions;  
10           receiving means associated with the TV display for receiving said selection signal;

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11 reading means coupled to said receiving means for fetching and reading, from the memory  
12 unit, information concerning an OSD menu item stored in the memory unit when said selection  
13 signal is received, said information corresponding to said selection signal; and

14 sending means coupled to said reading means for sending a control signal to said control  
15 means, said control signal corresponding to said fetched and read information concerning the OSD  
16 menu item, whereby a function of the TV display is controlled in response to the control signal and  
17 in response to said information fetched and read from the memory unit concerning the OSD menu  
18 item.

1 9. (Currently Once Amended) The TV system of claim 8, further comprising:  
2 a video processing unit;  
3 means for outputting an OSD character display signal to the video processing unit in  
4 response to said selection signal; and

5 actuation means associated with the video processing unit for receiving said OSD character  
6 display signal, and responsive thereto for causing a screen display of at least one OSD character,  
7 said at least one OSD character corresponding to said menu item of the OSD menu.

1 10. (Currently Once Amended) The TV system of claim 8, further comprising:  
2 means for determining whether a selection signal is identical to a signal stored in the  
3 memory unit and associated with information concerning an OSD menu item;  
4 means for executing a selected control function of the TV display in response to the

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5 selection signal when the selection signal is identical to a signal stored in the memory unit; and  
6 means for executing a default control function of the TV display in response to the  
7 selection signal when the selection signal is not identical to a signal stored in the memory unit.